

## AMENDMENTS TO THE CLAIMS

This listing of claim will replace all prior versions and listings of claims in the application.

1. – 2. (Cancelled)

3. (currently amended) ~~A method according to claim 1, wherein:~~ A method for communicating, comprising:

obtaining a first local address for a destination entity and a first global address associated with said destination entity, said destination entity is on a private network that uses said first local address to communicate with said destination entity;

creating a message that includes encapsulation within a single protocol level, said message includes said first local address as a first destination address and said first global address as a second destination address, said message includes a first IP packet, a second IP packet encapsulated in said first IP packet and a third IP packet encapsulated in said second IP packet[.]; and  
communicating said message toward said destination.

4. – 9. (canceled)

10. (currently amended) ~~A method according to claim 9, further comprising the steps of:~~ A method for communicating, comprising:

obtaining a first local address for a destination entity and a first global address associated with said destination entity, said destination entity is on a private network that uses said first local address to communicate with said destination entity;

creating a message that includes encapsulation within a single protocol level, said message includes said first local address as a first destination address and said first global address as a second destination address ;

communicating said message toward said destination entity;

receiving said message at an intermediate entity;  
removing a layer of encapsulation from said message;  
forwarding said message, after said step of removing, toward said destination entity;  
receiving said message at said destination entity;  
removing a layer of encapsulation from said message; and  
accessing information in said message after said step of removing.

11. (currently amended) A method according to claim 10, further comprising the steps of:  
providing a pseudo address to an application in said destination entity based on said message.

12. (cancelled)

13. (cancelled)

14. (currently amended) A method for communicating, comprising: according to claim 13, wherein:

receiving a message, said message includes encapsulation within a single protocol level, said message stores a first global address and a first local address as a destination address associated with a first entity, said first local address and said first global address correspond to said first entity, said first entity is on a private network, said first entity is reachable from outside the private network using said first local address and said first global address;

removing at least one level of encapsulation from said message, said message includes multiple levels of encapsulation after said step of removing; and

accessing a remaining level of encapsulation, said step of accessing includes communicating said message toward said first entity using said first global address, said message includes said first local address and said first global address.

15. – 22. (Cancelled)

23. (previously presented) A method for communicating, comprising:

using a domain name to obtain a first local address for a destination entity and a first global address associated with said destination entity, said destination entity is on a private network that uses said first local address to communicate with said destination entity;

creating a message that includes said first local address as a first destination address, said first global address as a second destination address and a first pseudo address; and

communicating said message toward said destination based on said first local address and said first global address.

24. (previously presented) A method according to claim 23, further comprising the step of:

receiving said first pseudo address from an application, said application uses said first pseudo address to address said destination, said step of receiving is performed prior to said step of creating a message.

25. (original) A method according to claim 24, further comprising the step of:

receiving a second pseudo address, said step of creating a message includes adding said second pseudo address to said message, said destination uses said second pseudo address to reference a source, said step of communicating is performed by said source.

26. (original) A method according to claim 25, further comprising the steps of:

receiving said message at said destination;

accessing said second pseudo address at said destination; and

using said second pseudo address with an application on said destination.

27. (original) A method according to claim 23, further comprising the step of:

receiving said first pseudo address, said destination uses said first pseudo address to reference a source, said step of communicating is performed by said source.

28. (original) A method according to claim 27, further comprising the steps of:  
receiving said message at said destination;  
accessing said first pseudo address at said destination; and  
using said first pseudo address with an application on said destination.

29. (original) A method according to claim 23, wherein:  
said message includes encapsulation within a single protocol level.

30. (original) A method according to claim 29, further comprising the steps of:  
receiving said message at an intermediate entity, said first pseudo address is stored in an inner layer of said encapsulation;  
removing an outer layer of said encapsulation at said intermediate entity without changing said inner layer of said encapsulation; and  
forwarding said message toward said destination.

31. (original) A method according to claim 30, further comprising the steps of:  
receiving said message at said destination;  
removing another layer of said encapsulation at said destination;  
accessing said first pseudo address at said destination; and  
using said first pseudo address with an application on said destination.

32. (previously presented) A method for communicating, comprising:  
receiving a message at a destination, said message includes a local address and a global address corresponding to said local address, said destination is on a private network, said message is

received from outside said private network based on a combination of said global address and said local address;

accessing a pseudo address corresponding to said local address and said global address; and using said pseudo address with an application.

33. (original) A method according to claim 32, wherein:  
said destination uses said pseudo address to refer to a source.

34. (original) A method according to claim 32, wherein:  
said destination uses said pseudo address to refer to said destination.

35. (original) A method according to claim 32, wherein:  
said message includes encapsulation within a single protocol level.

36. (original) A method according to claim 35, further comprising the steps of:  
removing a layer of encapsulation at said destination; and  
accessing said pseudo address in a remaining layer of said encapsulation.

37. (original) A method according to claim 35, further comprising the steps of:  
removing a layer of encapsulation at said destination; and  
accessing said pseudo address based on a remaining layer of said encapsulation.

38. - 39 (cancelled)

40. (currently amended) ~~One or more processor readable storage devices according to claim 38, wherein:~~ One or more processor readable storage devices having processor readable code

embodied on said processor readable storage devices, said processor readable code for programming one or more processors to perform a method comprising:

obtaining a first local address for a destination entity and a first global address associated with said destination entity, said destination entity is on a private network that uses said first local address to communicate with said destination entity;

creating a message that includes encapsulation within a single protocol level, said message includes said first local address as a first destination address and said first global address as a second destination address; and

communicating said message toward said destination, said message includes a first IP packet, a second IP packet encapsulated in said first IP packet and a third IP packet encapsulated in said second IP packet.

41. (canceled)

42. (previously presented) One or more processor readable storage devices having processor readable code embodied on said processor readable storage devices, said processor readable code for programming one or more processors to perform a method comprising:

obtaining a first local address for a destination and a first global address for said destination;

creating a message that includes encapsulation within a single protocol level, said message includes said first local address and said first global address, said message includes a first IP packet, said message includes a second IP packet encapsulated in said first IP packet, said message includes a third IP packet encapsulated in said second IP packet, said message includes a fourth IP packet encapsulated in said third IP packet, said first IP packet includes said first global address as a first destination address and said second local address as a first source address, said second local address corresponds to said source entity, said second IP packet includes said first global address as a second destination address and a second global address as a second source address, said second global address corresponds to said source entity, said third IP packet includes said first local address as a

third destination address and said second global address as a third source address, said fourth IP packet includes a pseudo address; and

communicating said message toward said destination.

43. – 44. (cancelled)

45. (currently amended) ~~One or more processor readable storage devices according to claim 44, wherein:~~ One or more processor readable storage devices having processor readable code embodied on said processor readable storage devices, said processor readable code for programming one or more processors to perform a method comprising:

receiving a message, said message includes encapsulation within a single protocol level, said message stores a first global address and a first local address as a destination address associated with a first entity, said first entity is on a private network, said first entity is reachable from outside the private network by a combination of the first local address and the first global address;

removing at least one level of encapsulation from said message; and

accessing a remaining level of encapsulation, said message includes multiple levels of encapsulation after said step of removing,[[;]] said step of accessing includes communicating said message toward said first entity using said first global address, said message includes said first local address and said first global address,[[;]] and said message is an IP packet.

46. (cancelled)

47. (currently amended) ~~One or more processor readable storage devices according to claim 44, wherein said method further comprises the steps of:~~ One or more processor readable storage devices having processor readable code embodied on said processor readable storage devices, said processor readable code for programming one or more processors to perform a method comprising:

receiving a message, said message includes encapsulation within a single protocol level, said message stores a first global address and a first local address as a destination address associated with a first entity, said first entity is on a private network, said first entity is reachable from outside the private network by a combination of the first local address and the first global address;

removing at least one level of encapsulation from said message;

accessing a remaining level of encapsulation;

identifying a pseudo address based on said message; and

providing said pseudo address to an application at said destination.

48. - 50 (cancelled)

51. (previously presented) One or more processor readable storage devices having processor readable code embodied on said processor readable storage devices, said processor readable code for programming one or more processors to perform a method comprising:

receiving a message at a destination, said message includes a local address and a global address corresponding to said local address, said destination is on a private network, said message is received from outside the private network based on said global address and said local address;

accessing a pseudo address corresponding to said local address and said global address; and using said pseudo address with an application.

52 (original) One or more processor readable storage devices according to claim 51, wherein:

said message includes encapsulation within a single protocol level.

53. (original) One or more processor readable storage devices according to claim 51, wherein said method further comprises the steps of:

removing a layer of encapsulation at said destination; and

accessing said pseudo address based on a remaining layer of said encapsulation.



54. – 63. (Cancelled)

64. (previously presented) An apparatus, comprising:  
a communication interface;  
a memory device; and  
one or more processor, said one or more processors programmed to perform a method comprising:

using a domain name to obtain a first local address for a destination entity and a first global address associated with said destination entity, said destination entity is on a private network that uses said first local address to communicate with said destination entity,  
creating a message that includes said first local address as a first destination address, said first global address as a second destination address and a first pseudo address, and  
communicating said message toward said destination based on said first local address and said first global address.

65. (original) An apparatus according to claim 64, wherein said method further comprises the steps of:

receiving said first pseudo address from an application, said application uses said first pseudo address to address said destination, said step of receiving is performed prior to said step of creating a message.

66. (original) An apparatus according to claim 64, wherein:  
said message includes encapsulation within a single protocol level.

67. (previously presented) An apparatus, comprising:  
a communication interface;  
a memory device; and

one or more processor, said one or more processors programmed to perform a method comprising:

receiving a message at a destination, said message includes a local address and a global address corresponding to said local address, said destination is on a private network, said message is received from outside the private network based on said global address and said local address,

accessing a pseudo address corresponding to said local address and said global address, and

using said pseudo address with an application.

68. (original) An apparatus according to claim 67, wherein:  
said message includes encapsulation within a single protocol level.

69. (original) An apparatus according to claim 67, wherein said method further comprises the steps of:

removing a layer of encapsulation at said destination; and

accessing said pseudo address based on a remaining layer of said encapsulation.

70. (cancelled)